Air Compressor
ENGINE DRIVEN

Operating & Maintenance Instructions
**WARNING!**
DO NOT ATTEMPT TO ALTER ENGINE SPEED SETTINGS
DOING SO WILL INVALIDATE YOUR GUARANTEE

### SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>PP15ND</th>
<th>PPH15ND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>2090980</td>
<td>2091000</td>
</tr>
<tr>
<td>Engine Type</td>
<td>HONDA GX200</td>
<td>HONDA GX200</td>
</tr>
<tr>
<td>Pump Type</td>
<td>MK103</td>
<td>MK103</td>
</tr>
<tr>
<td>Air Receiver size</td>
<td>50 litres</td>
<td>50 litres</td>
</tr>
<tr>
<td>Max. output Pressure</td>
<td>100psi</td>
<td>100psi</td>
</tr>
<tr>
<td>Air Displacement</td>
<td>15cfm</td>
<td>15cfm</td>
</tr>
<tr>
<td>Outlet connectors</td>
<td>1/4” BSP</td>
<td>1/4” BSP</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>940 x 410 x 810</td>
<td>1010 x 450 x 810</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>70</td>
<td>74</td>
</tr>
<tr>
<td>Sound Power Level**</td>
<td>** See Declaration of Conformity **</td>
<td>** See Declaration of Conformity **</td>
</tr>
</tbody>
</table>

**NOTE:**
Specifications are correct at the time of going to print. Clarke International reserves the right to change specifications at any time, as it sees fit, in the interests of safety or improvement in design.

Copyright: Clarke International, All rights reserved. June, 2008
Thank you for purchasing this Clarke portable compressor. The unit is powered by a Honda engine, a manual for which, is provided separately. Please refer to that manual for all matters relating to the engine, ...starting and stopping procedures, maintenance etc.

This product is guaranteed against faults in manufacture for 12 months from purchase date. Please keep your receipt as proof of purchase.

This guarantee is invalid if the product has been abused or tampered with in any way, or not used for the purpose for which it is intended.

The reason for return must be clearly stated.

This guarantee does not affect your statutory rights.

---

Specifications........................................................................................................... 2
Guarantee ................................................................................................................ 3
For your Own Safety ................................................................................................. 4
Important General Notes ........................................................................................ 5
General Layout ......................................................................................................... 6
Preparation for Use ................................................................................................... 7
Starting the Compressor .......................................................................................... 8
Shutting Down the Compressor ............................................................................... 9
Maintenance .......................................................................................................... 10
Parts Lists and Diagrams ................................................................................. 11 -13
Troubleshooting ............................................................................................... 14 -16
Torque values for cylinder head bolts .............................................................. 16
Declaration of Conformity .................................................................................. Back Cover
FOR YOUR SAFETY

WARNING
As with all machinery, there are certain hazards involved with their operation and use. Exercising respect and caution will considerably lessen the risk of personal injury. However, if normal safety precautions are overlooked, or ignored, personal injury to the operator, or damage to property may result. It is in your own interest to read and pay attention to the following rules:

General Precautions

ALWAYS

• ensure that all individuals using the compressor have read and fully understand the Operating Instructions supplied and are suitably trained
• stop the engine and ensure the pressure is expelled from the air receiver BEFORE carrying out any maintenance.
• ensure that there is adequate ventilation when spraying flammable materials e.g. cellulose paint, and keep clear of any possible source of ignition.
• protect yourself. Think carefully about any potential hazards which may be created by using the air compressor and use the appropriate protection. e.g. Goggles will protect your eyes from flying particles. Face masks will protect you against paint spray and/or fumes. Ear defenders will prevent hearing damage caused by load noise.
• consult paint manufacturers instructions for safety and usage, before spraying
• ensure that the air supply is turned off at the machine outlet and all pressurised air from the machine and other equipment attached to it, is expelled BEFORE disconnecting air hoses or other equipment.
• make sure that children and animals are kept well away from the compressor and any equipment attached to it.
• ensure that any equipment or tool used in conjunction with your compressor, has a safety working pressure exceeding that of the machine.

NEVER

• direct a jet of air at people or animals, and NEVER discharge compressed air against the skin. COMPRESSED AIR CAN BE DANGEROUS!
• leave pressure in the receiver overnight, or when transporting.
• adjust, or tamper with the safety valves. The maximum pressure is factory set, and clearly marked on the machine.
• operate in wet or damp conditions. Keep the machine dry at all times. Similarly, a clean atmosphere will ensure efficient operation. Do not use in dusty or otherwise dirty locations.
• touch the machine until it has cooled down...some of the metal parts can become quite hot during operation.
• operate your compressor with any guards removed.
**Fire Prevention**

**ALWAYS**
- switch the engine OFF when refuelling.
- refuel away from any source of heat.
- refuel in a well ventilated area.

**NEVER**
- overfill the tank, fill to the level specified.
- smoke whilst refuelling and avoid smoking or using a naked flame near the compressor.
- start the engine if there is spilled fuel. Any spillage must be wiped clean and the compressor allowed to dry before attempting to start the engine.

**Exhaust Gas Precautions**

**ALWAYS**
- ensure there is adequate ventilation when using the compressor.
- position the compressor so that the exhaust is pointed away from people or animals.

**NEVER**

**WARNING:**
Exhaust fumes can be fatal

- use the compressor indoors or in an enclosed area. (i.e. in a warehouse, tunnel, well, hold etc.)

**IMPORTANT General Notes**

- **NEVER** allow anyone, not fully familiar with compressors, to use this equipment.
- **DO NOT** alter the engine settings....these settings are set at the factory. Should they need recalibration - consult your Clarke dealer
PREPARATION FOR USE

A. Environmental

- Ensure the compressor is sited on a firm level surface.
- Ensure the environment is dry and dust free.
- Ensure there is adequate ventilation for:
  a) Air intake to compressor pump
  b) Cooling for compressor pump
  c) Engine exhaust gases.

B. Engine

Check oil and fuel levels and a visual check of components. Refer to engine service manual.

C. Pump

- Check oil level on the Dipstick - to level marked.

D. Fuelling

Fill with unleaded petrol, according to the instructions within the engine manual.

- Ensure the fuel tap is set to the required position.
- Ensure the fuel hose and connectors are intact, in perfectly serviceable condition and there is no leakage.

Note: Always use a funnel to fill the fuel tank so as to avoid accidental spillage of fuel. If fuel is spilled it must be removed from the unit and surrounding area, before attempting to start the engine.

E. Receiver

- Drain off any condensate, by opening the drain cock (see Fig. 1). Remember to close the drain cock when completed.

NOTE: This should be carried out DAILY when the compressor is in constant use.

F. Air Hose & Air Tool

- Attach the air hose to the outlet using an appropriate connector.

Note: Quick fit nuts are provided. These may be removed if a 1/4”BSP (male thread) is required.
- Attach the air tool/spray gun to the air hose...If using snap couplings, use a whip end, available from your Clarke dealer.
STARTING THE COMPRESSOR

Initial Start-up

1. Fully open the receiver drain cock, (located between the wheels).
2. Start the engine, according to the instructions contained in the engine service manual, if this is the first time you use the compressor, allow to run for 10 minutes.
3. After a ten minute period, close the drain cock then ensure both air outlet sliding valves are pushed fully INWARDS to close the outlet.
   Pressure will build up in the receiver and eventually the air governor will operate so that the engine runs off load. The pressure registered on the pressure gauge should be 100psi.
4. Slide the outlet taps outwards to allow air to escape from the outlets, and slowly turn the pressure regulator clockwise. Observe the pressure gauge.
   When the pressure has dropped by approx. 20psi, the Air Governor/Load Genie will operate and the compressor will cut in again. Close the sliding outlet valves and pressure in the air receiver will once again increase.
5. Finally, stop the engine and set the pressure regulator to zero pressure (turned fully anticlockwise) and attach the air hose and air tool.
6. Open the sliding valves then set the pressure regulator to full pressure (100psi) and check for air leaks at the tool and connectors.
   - If leaks are apparent, set the regulator to zero pressure (fully anticlockwise), press the trigger of the tool to ensure no air is present in the airline, then rectify the problem before proceeding.
   - If no leaks are evident, Open the bleed valve, start the engine and then close the bleed valve. Set the outlet pressure to the desired value and proceed to use the air tool in accordance with the manufacturers instructions.

![Fig.2](image)
When starting subsequently, start the machine as follows:

1. At the beginning of the day, open the drain cock and allow any condensate to drain completely, then close the drain cock.

2. To ease starting, ensure there is no pressure in the pump outlet manifold by opening the Bleed Valve (See Fig.2).

3. Connect the air hose to one of the outlets and the air tool and set the pressure regulator to zero pressure (turned fully anticlockwise).

4. Start the engine in accordance with the instructions contained in the engine service manual, then close the bleed valve and allow pressure to build up.

5. When the Air Governor/Load Genie has operated and the compressor has gone ‘off line’, slide the outlet valve outwards fully then adjust the pressure regulator so that the desired pressure is registered on the gauge.

6. Check for air leaks at the tool and connectors, before proceeding.

STOPPING THE COMPRESSOR

At the end of the day, stop the compressor in accordance with the instructions in the engine manual, then open the drain cock.

Close the air outlet by sliding both valves inwards.

Operate the air tool trigger or operating lever etc., to ensure there is no pressure in the air line, then disconnect airline and tool.

WARNING!

DO NOT under any circumstances attempt to remove the air tool or disconnect the air hose until you are satisfied that the pressure has been relieved.

Finally, close the drain cock.

Take care not to touch the engine or pump as they remain hot for some time after use.
MAINTENANCE

**DAILY**

a. Drain Air Receiver of any condensate

b. Check engine oil level and top up where necessary. Ensure the dipstick breather hole is not blocked.

c. Check pump oil level

**WEEKLY**

a. Clean Pump Air Filter

Unbolt the Pump Air Filter cover and pull away to reveal foam element. If badly contaminated, replace. Remove any loose contaminants if any then replace.

b. Clean the engine cooling fins.

**6 MONTHLY**

Renew pump lubricating oil.

Drain pump by removing the drain screw (Arrowed in Fig.3).

Replace screw and top up until oil is level with the mark on the dipstick, using SAE40 oil available from your Clarke dealer as follows:

- Compressor oil - 1 litre: Part No. 3050810
- Compressor oil - 5 litre: Part No. 3050802

In addition to the above, check the engine manual for service schedule.

Repairs should only be carried out by a qualified engineer. If problems occur, contact your Clarke dealer.
# PUMP PARTS

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>15ND Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Screw</td>
<td>014013054</td>
</tr>
<tr>
<td>2</td>
<td>Lower Cover</td>
<td>113149015</td>
</tr>
<tr>
<td>3</td>
<td>Casing</td>
<td>113167001</td>
</tr>
<tr>
<td>4</td>
<td>Bearing</td>
<td>033027000</td>
</tr>
<tr>
<td>5</td>
<td>Seal</td>
<td>010053000</td>
</tr>
<tr>
<td>6</td>
<td>Front Cover</td>
<td>113149008</td>
</tr>
<tr>
<td>7</td>
<td>Screw</td>
<td>014013021</td>
</tr>
<tr>
<td>8</td>
<td>Flywheel</td>
<td>013160010</td>
</tr>
<tr>
<td>9</td>
<td>Washer</td>
<td>014005001</td>
</tr>
<tr>
<td>10</td>
<td>Screw</td>
<td>113160011</td>
</tr>
<tr>
<td>11</td>
<td>Screw</td>
<td>014013082</td>
</tr>
<tr>
<td>12</td>
<td>Washer</td>
<td>014005025</td>
</tr>
<tr>
<td>13</td>
<td>Rear Cover</td>
<td>113149009</td>
</tr>
<tr>
<td>14</td>
<td>Oil Dipstick</td>
<td>012036000</td>
</tr>
<tr>
<td>15</td>
<td>Screw</td>
<td>014010044</td>
</tr>
<tr>
<td>16</td>
<td>Crankshaft</td>
<td>113167003</td>
</tr>
<tr>
<td>17</td>
<td>Connecting Rod</td>
<td>113150004</td>
</tr>
<tr>
<td>18</td>
<td>Piston Ring Kit</td>
<td>213167001</td>
</tr>
<tr>
<td>19</td>
<td>Circlip</td>
<td>015023000</td>
</tr>
<tr>
<td>20</td>
<td>Gudgeon Pin</td>
<td>116025006</td>
</tr>
<tr>
<td>21</td>
<td>Piston</td>
<td>113164009</td>
</tr>
<tr>
<td>22</td>
<td>Complete Piston</td>
<td>413167006</td>
</tr>
<tr>
<td>23</td>
<td>Cylinder</td>
<td>113167002</td>
</tr>
<tr>
<td>24</td>
<td>Valve Holder Plate</td>
<td>413167005</td>
</tr>
<tr>
<td>25</td>
<td>Head</td>
<td>113150022</td>
</tr>
<tr>
<td>26</td>
<td>Filter Cartridge</td>
<td>017003000</td>
</tr>
<tr>
<td>27</td>
<td>Intake Filter</td>
<td>317001000</td>
</tr>
<tr>
<td>28</td>
<td>Screw</td>
<td>014002041</td>
</tr>
<tr>
<td>29</td>
<td>Conveyor</td>
<td>113150002</td>
</tr>
<tr>
<td>30</td>
<td>Screw</td>
<td>014006121</td>
</tr>
<tr>
<td>31</td>
<td>Complete Seal Kit</td>
<td>213167002</td>
</tr>
<tr>
<td>32</td>
<td>Manifold</td>
<td>116091024</td>
</tr>
<tr>
<td>33</td>
<td>Automatic Discharge Valve</td>
<td>011158000</td>
</tr>
</tbody>
</table>
## PARTS LIST

<table>
<thead>
<tr>
<th>PP15ND</th>
<th>PPH15ND</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Image 87x438 to 120x509]</td>
<td>HS17210-ZE1-822</td>
</tr>
<tr>
<td>![Image 63x407 to 139x426]</td>
<td>HS17218-ZE1-821</td>
</tr>
<tr>
<td>![Image 51x336 to 158x392]</td>
<td>HS98079-56846</td>
</tr>
<tr>
<td>![Image 67x258 to 127x323]</td>
<td><img src="195x230" alt="Diagram" /></td>
</tr>
<tr>
<td><img src="200x286" alt="Diagram" /></td>
<td>1. HS28442-ZH8-003</td>
</tr>
<tr>
<td><img src="200x286" alt="Diagram" /></td>
<td>2. HS28442-ZH8-003</td>
</tr>
<tr>
<td><img src="200x286" alt="Diagram" /></td>
<td>3. HS28462-ZH8-003</td>
</tr>
<tr>
<td><img src="54x198" alt="Diagram" /></td>
<td>5100610</td>
</tr>
<tr>
<td><img src="54x184" alt="Diagram" /></td>
<td>2100177</td>
</tr>
<tr>
<td>50mm Pressure Gauge</td>
<td>2000161</td>
</tr>
<tr>
<td>Safety Valve Complete</td>
<td>2000192</td>
</tr>
<tr>
<td>Drain Cock</td>
<td>2000220</td>
</tr>
<tr>
<td>V-Belt</td>
<td>2000078</td>
</tr>
<tr>
<td>Wheel</td>
<td>2100289</td>
</tr>
<tr>
<td>Wheel Retaining Clip</td>
<td>2100306</td>
</tr>
<tr>
<td>Soft Rubber Foot</td>
<td>2100313</td>
</tr>
<tr>
<td>Pump Complete.</td>
<td>1390085 (MK103)</td>
</tr>
<tr>
<td>Pulley</td>
<td>2100084</td>
</tr>
<tr>
<td>Engine complete</td>
<td>800055 (GX200QH)</td>
</tr>
<tr>
<td>Manifold 3-way</td>
<td>CBM45469000</td>
</tr>
<tr>
<td>Air Receiver</td>
<td>1999705LP</td>
</tr>
</tbody>
</table>
**IMPORTANT**

1. Any remedial work that may be required must be carried out by a qualified engineer.
2. Switch off the engine before removing any parts from the compressor.
3. Drain the Air Receiver before dismantling any part of the compressor unit’s pressure system.
4. If your compressor develops a fault do not use until the fault has been rectified.
5. For troubleshooting the engine, refer to the engine manual.

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>PROBABLE CAUSE</th>
<th>REMEDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine difficult to start</td>
<td>Load Genie leaking (compressor unit is on load during start). Load Genie valve blocked, possibly frozen up.</td>
<td>Stop engine and empty air receiver. Clean or replace Load Genie. Thaw Load Genie out (Unit must be installed in frost-free place).</td>
</tr>
<tr>
<td>Compressor unit constantly ‘on load’</td>
<td>Load Genie defective. Load Genie set at a pressure higher than the safety valve’s opening pressure. Load Genie leaking.</td>
<td>Have Load Genie serviced or replaced. Contact Clarke Service Department.</td>
</tr>
<tr>
<td>Compressor constantly ‘on load’ and cannot attain the working pressure required.</td>
<td>Suction filter blocked. Leak between compressor block and air receiver leaks in or near air receiver. Valves blocked by dirt, paint, dust or choked up. Inspection cover or drain plug leaking. Pressure gauge defective. Unit too small in relation to air consumption. Compressor worn.</td>
<td>Clean / Change filter. Tighten connection and repair leak. Contact Clarke Service Department. Empty air receiver and change seals/plugs. Change pressure gauge. Use a larger capacity compressor. Have compressor overhauled or replace it.</td>
</tr>
</tbody>
</table>
| Unusual noise from compressor. | Bolts loose.  
Flywheel loose.  
Unit installed on an unsuitable base.  
Bearings, piston rings or cylinder worn.  
Valve broken. | Tighten bolts - see page 16.  
Tighten flywheel.  
Move unit to a more solid base.  
Contact Clarke Service Department  
Contact Clarke Service Department  
Contact Clarke Service Department |
|---|---|---|
| Compressor becomes too hot. | Insufficient ventilation.  
Oil level too low (check 2 or 3 times after stopping).  
Fault in valves (machine not stopping).  
Blown head gasket (machine not stopping).  
Dirt on cooling fins or suction filter.  
Unit working at too high a pressure.  
Not fully unloading  
Load genie partly blocked.  
Compressor being overworked and running continuously. | See that sufficient air is supplied to flywheel or fan of compressor and that hot air is properly vented.  
Fill with oil – see Page 10.  
Contact Clarke Service Department  
Contact Clarke Service Department  
Clean cooling fins and suction filter.  
Contact Clarke Service Department  
Contact Clarke Service Department  
Contact Clarke Service Department  
Connect to a supplementary compressor or install a larger model. |
Compressor unit runs on and off load more frequently than usual.
Large amount of condensation in air receiver.
Leaks in system
Drain off condensation Regularly (Every day before use).
Locate leaks (by means of soapy water) and repair.

Compressor unit runs “on load” when no air is being used.
Leaks in system.
Locate leaks (by means of soapy water) and repair.

Compressor’s oil consumption rising.
Too much oil in compressor.
Leaks around crank case.
Working temperature of compressor too high because of insufficient cooling.
Cylinder worn.
Intake air filter blocked.
Check oil level 2 or 3 minutes after stopping.
Contact Clarke Service Department
Increase ventilation to air compressor.
Contact Clarke Service Department
Clean or replace

Oil in the air delivered.
Sump over full.
Cylinder worn.
Intake air filter blocked.
Reduce oil to correct level.
Contact Clarke Service Department
Clean / Change air filter.

Oil level rises although no oil has been put in.
Condensation in oil pump.
Compressor over dimensioned.

Condensation at outlet points.
Piping installation incorrect.
Compressor taking in air which is too warm.
Consult your local dealer.
Obtain better fresh-air supply to compressor.

Torque values for cylinder head bolts

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>Torque Value (NM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP15ND, PPH15ND</td>
<td>20.6 - 21.6</td>
</tr>
</tbody>
</table>
DECLARATION OF CONFORMITY

We declare that this product complies with the following standards/directives

- 98/37/EC
- 2000/14/EC ANNEX VI PROCEDURE 1
- 87/404/EEC

Notified Body: A.V. Technology Ltd,
Place: Cheadle Heath, Stockport SK3 0XU
Tech. File held at: Clarke Int'l Service Centre,
Shrubland Rd., London E10 7RB.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Measured Sound Power Level</th>
<th>Guaranteed Sound Power Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP15ND 4.8Kw</td>
<td>96.0dB_{LWA}</td>
<td>96.5dB_{LWA}</td>
</tr>
<tr>
<td>PPH15ND 4.8Kw</td>
<td>96.0dB_{LWA}</td>
<td>96.5dB_{LWA}</td>
</tr>
</tbody>
</table>

Description: ENGINE DRIVEN AIR COMPRESSOR

Serial No: 

Signed: [Signature]

Engineering Manager

Date: 19 March, 2007

Clarke International is a trading style of Clarke International Limited
A SELECTION FROM THE VAST RANGE OF

QUALITY PRODUCTS

AIR COMPRESSORS
From DIY to industrial, Plus air tools, spray guns and accessories.

GENERATORS
Prime duty or emergency standby for business, home and leisure.

POWER WASHERS
Hot and cold, electric and engine driven - we have what you need

WELDERS
Mig, Arc, Tig and Spot. From DIY to auto/industrial.

METALWORKING
Drills, grinders and saws for DIY and professional use.

WOODWORKING
Saws, Sanders, lathes, mortisers and dust extraction.

HYDRAULICS
Cranes, body repair kits, transmission jacks for all types of workshop use.

WATER PUMPS
Submersible, electric and engine driven for DIY, agriculture and industry.

POWER TOOLS
Angle grinders, cordless drill sets, saws and Sanders...

STARTERS/CHARGERS
All sizes for car and commercial use.

For spare parts and servicing, please contact your nearest dealer, or Clarke International on

020 8988 7400
e-mail: Parts@clarkeinternational.com e-mail: Service@clarkeinternational.com

Clarke INTERNATIONAL
Hemnall Street, Epping, Essex CM16 4LG